

Abstracts

Inverted Strip Dielectric Waveguide for Millimeter-Wave Integrated Circuits

T. Itoh. "Inverted Strip Dielectric Waveguide for Millimeter-Wave Integrated Circuits." 1976 Transactions on Microwave Theory and Techniques 24.11 (Nov. 1976 [T-MTT] (Special Issue on Millimeter Waves: Circuits, Components, and Systems)): 821-827.

A new type of dielectric waveguide, which has a number of advantages over other previously available waveguide structures for millimeter-wave integrated circuits, is described. Dispersion characteristics and the field distributions in the waveguide are calculated using the concept of effective dielectric constant. Field distributions have been measured in the 80-GHz range in order to check the accuracy of the analytical results. This measurement has been done using a novel experimental technique, which should also be applicable to many other millimeter-wave waveguides and components.

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